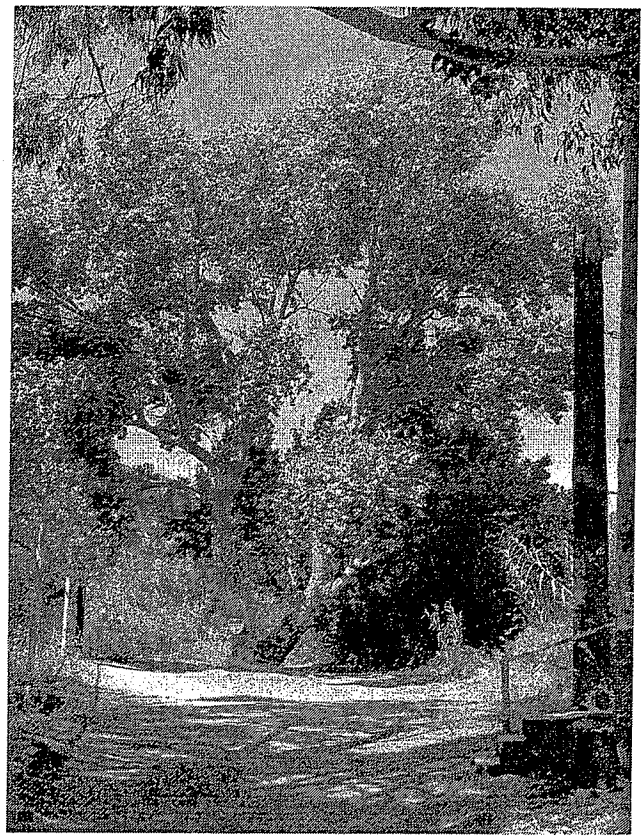
RODEO GROUNDS BERM REMOVAL PROJECT

OAK TREE REPORT
AND
NATIVE TREE PRESERVATION AND REMOVAL PLAN



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SUMMARY

In order to remove the fill materials of the Rodeo Grounds Berm and restore the floodplain and channel of Topanga Creek, it will be necessary to remove the following native trees that are growing into the berm:

- Approximately 30 willows (*Salix sp.)* of varying sizes
- Two toyon (*Heteromeles arbutifolia*)
- One elderberry (*Sambucus mexicanus*)
- One coast live oak (*Quercus agrifolia*) Tree #1
- One heritage cottonwood (*Populus fremontii*) Tree #2
- One CA walnut (*Juglans californica*) Tree #3

Both the California Coastal Commission and the California Department of Fish and Game will require mitigation for the loss of these native trees. Since the goal of this project is to restore the natural floodplain and restore the riparian corridor, the mitigation plantings will be included in the more comprehensive Revegetation and Restoration Plan. At minimum, the mitigation planting proposed include:

- five one gallon coast live oaks, 10 acorns in tree tubes
- 15 cuttings propagated from the cottonwood
- three one gallon walnuts, 10 nuts planted in tree tubes
- 100 willow stake cuttings
- 10 one gallon toyon
- 10 one gallon elderberry

Due to their location within the grouted rip rap, and on top of the fill bed, it does not appear possible to retain either the 12 inch diameter coast live oak (#1), or the small CA walnut tree (#3) growing on the top of the berm near the cottonwood.

Retention of the mature cottonwood (#2), which has been buried in 14 feet of fill material since at least 1970 will be difficult, if not impossible. Preliminary examination of the trunk at ground level indicates that over 80% is decayed to some degree. The tree is showing evidence of widespread rot, including oozing, branch loss, twig dieback, and fruiting bodies on old branch wounds.

Typically, trunks buried in fill become structurally compromised and fail once the surrounding fill is removed. Adventitious roots along the trunk would also be cut in order to remove the fill to original grade, further compromising the structural stability and health of the tree. Finally, the tree will be located within a restored floodplain and subject to potential creek channel adjustments and the force of storm flows.

Additional exploratory excavation by a qualified arborist should be performed during the berm removal in order to assess the condition of the trunk prior to implementation of any tree preservation strategies. If the trunk is further compromised within the top 3 feet of the berm fill, it can be assumed that it will probably fail once the berm is removed. If it is sound, then additional excavation may be performed and the preservation strategies implemented.

Retention of the two mature sycamore trees (#5, #6) located towards the northwest end of the berm, as well as the one (#4) near the cottonwood, should be attempted, as long as it is possible to retain islands of fill surrounding the main root ball and the trees appear stable.

Since the excavation route may need to extend towards the southwest, an additional three sycamores (#7, #8, #9) will also be close to the removal zone. Given the location of these trees on a small rise just north of the material that will be removed, there is not expected to be any impact to these trees.

Since there will be no direct targets in the creek, California Department of Parks and Recreation can then decide to a) remove the cottonwood (#2) and sycamore tree (#4) during the berm excavation; or b) allow the cottonwood and sycamore tree to fail and fall, providing large woody debris in the restored floodplain area.

BACKGROUND

The Rodeo Grounds Road Berm was installed without plans or permits by tenants of floodplain structures to protect their rental homes from flooding. It is located approximately 2,500 feet upstream from the ocean on Topanga Creek, and covers 1.8 acres. It was built in at least 2 stages, re-aligning and replacing a lower, smaller dirt road that had been installed in the 1920's. According to local residents, asphalt and paving from the Lincoln Blvd. re-paving project were placed on the site in the late 1960's. Additional road spoils from throughout the watershed were added to raise the berm higher following the 1980 flood. Since the property was incorporated into Topanga State Park in 2001, the structures are being removed. It is anticipated that all the structures currently protected by the berm will be removed prior to the start of this project.

The presence of mature trees near this location is evident in aerial photographs dating back to 1928. It is not possible, given the resolution of the existing aerial photos, to determine if the canopies visible in the photos are the same trees as currently exist, or not. Several historic aerial photos are included in Appendix A showing the approximate current location of trees addressed in this report.

According to local residents, the trunk of the cottonwood tree was buried in the fill as it was placed. Based on the anecdotal reports, the fill material is approximately 14 feet deep to the original creek level and root crown of the cottonwood tree. This depth is supported by auger drilled bore hole data gathered on 17 February 2005, when a soil characterization study was conducted. Borehole #1 was located just outside the dripline of the cottonwood tree on the south side.

In order to restore the floodplain and channel of Topanga Creek to its original configuration, the berm needs to be removed. Removal will restore the natural creek channel, restore over 12 acres of wetland/ riparian floodplain, allow storm generated removal of sediment build up, and restore above surface creek flow to provide summer rearing habitat, as well as improve over-winter habitat and critical passage links for endangered southern steelhead trout between the main stem of Topanga Creek and the ocean.

It is the intention of California Department of Parks and Recreation (CDPR) to preserve the cottonwood and sycamore trees if at all possible. This report provides recommendations for protecting the tree during the berm removal excavation, supporting the trunk should that be warranted, and/or removing the tree if it is determined to be a hazard and impossible to retain.

ASSIGNMENT

Removal of the berm requires preparation and compliance with all pertinent California Environmental Quality Act (CEQA) regulations, especially those relating to protection of native riparian communities. It was determined that a report describing impacts to existing native trees and possible opportunities to avoid or mitigate these impacts was needed for inclusion with the Mitigated Negative Declaration (MND) being prepared for the Rodeo Grounds Berm Removal Project.

The assignment was:

- to identify all native trees within and on the banks of the berm that might be impacted by the proposed excavation;
- evaluate which trees could be retained and which needed to be removed;
- examine the condition and possible retention of the mature cottonwood;
- provide recommendations for protecting trees to remain during the berm removal; and,
- develop appropriate mitigation strategies for any native trees lost.

This evaluation was limited by the inability to excavate the fill material around the mature cottonwood tree to determine how deep the observed ground level decay extends.

PURPOSE AND USE OF REPORT

The purpose of this report is to document the visual condition of mature native trees growing in the fill banks, identify those that will need to be removed, and to provide recommendations on ways to retain as many as possible, once the fill is removed. It also provides recommended mitigations and tree protection strategies to meet requirements of the California Coastal Commission and California Department of Fish and Game Streambed Alteration Permit (1044).

OBSERVATIONS

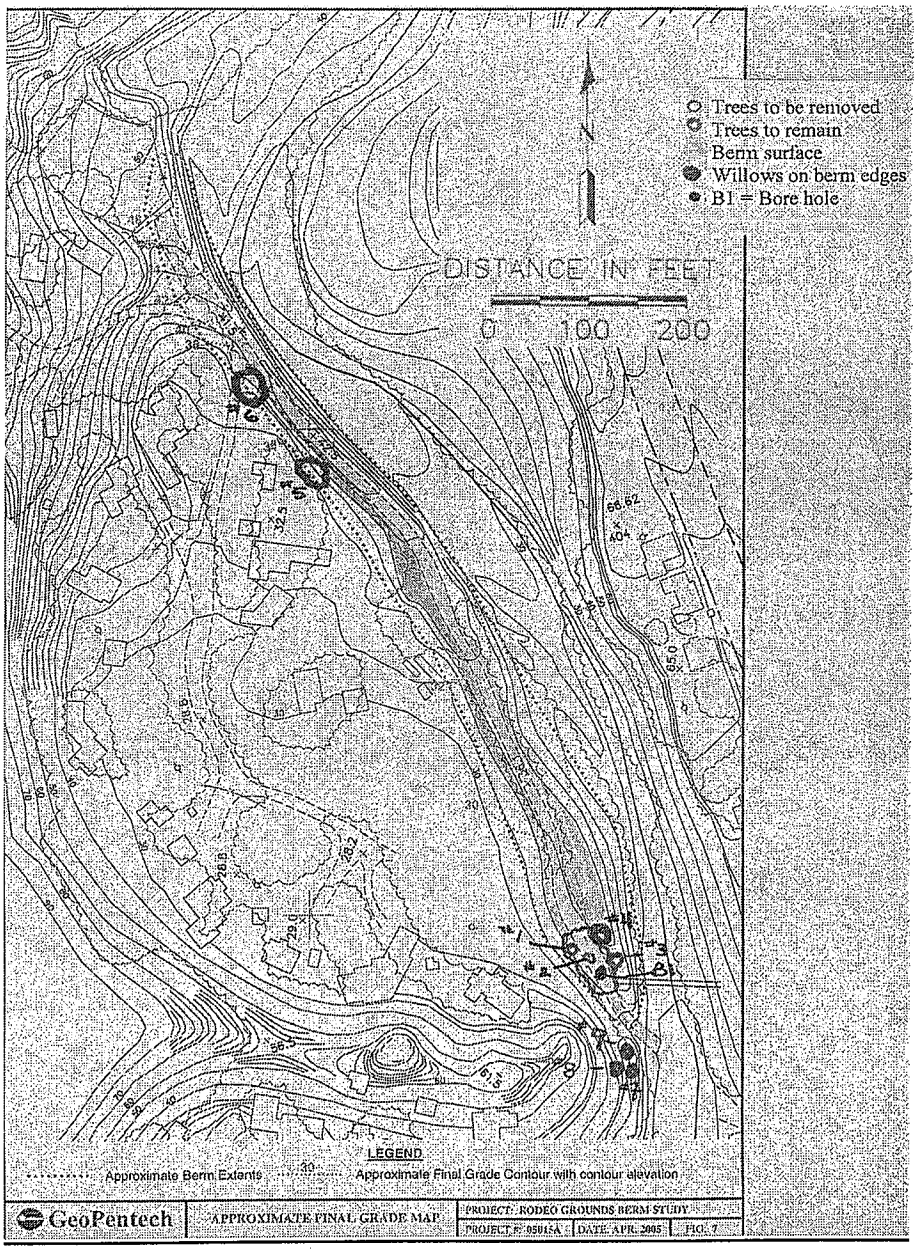
Field measurements for the coast live oak and sycamores were taken on 21 September 2005. The mature cottonwood tree was visually examined on 14 April, 21 September and 14 November 2005. Standard measurements and data on tree condition were evaluated using the standard for evaluating tree condition format of the International Society of Arboriculture, Guide to Appraisal of Landscape Plants, 2000. A summary of the field notes is included in Appendix B. Preliminary examination of the trunk/ground interface of the cottonwood for soundness was done with hammer and chisel.

Site location: The trees are located in or adjacent to an illegally constructed fill berm, which bisects the floodplain of Topanga Creek, approximately 2,500 feet upstream from the ocean. The berm is heavily compacted but not paved, allowing some infiltration of rainfall. The east bank is

armored with riprap and gunnite sheets that have been overgrown with mulefat, willow and a mix of exotic herbaceous plants. The west bank is less visibly armored,

Over the years, a mix of native and non-native trees, shrubs and herbaceous plants have become established on the banks of the berm. Removal of all non-native trees and *Arundo donax* on the berm is envisioned. Of the native trees, willows are dominant, followed by sycamores, with individual elderberry, toyon and CA walnut trees found as well.

Figure 1. Location of Trees in the Rodeo Grounds Road Berm Project



Trees to be Removed:

- Approximately 30 willows (*Salix sp.)* of varying sizes
- Two toyon (*Heteromeles arbutifolia*)
- One elderberry (*Sambucus mexicanus*)
- One coast live oak (*Quercus agrifolia*) Tree #1
- One heritage cottonwood (*Populus fremontii*) Tree #2
- One CA walnut (*Juglans californica*) Tree # 3

While each of the individual willows, toyon and elderberry are important, their location within the grouted riprap along the edges of the berm make it impossible to salvage them when removing the fill. These are species common to the riparian zone of Topanga Creek, and are fast growing. Prior to their removal, cuttings will be harvested and grown into replacement trees that will be planted back on the site. Specific information is provided for the coast live oak, walnut and cottonwood, as each of these species is either unusual or identified as significant by local and state authorities.

Tree #1. Coast Live Oak (*Quercus agrifolia*)

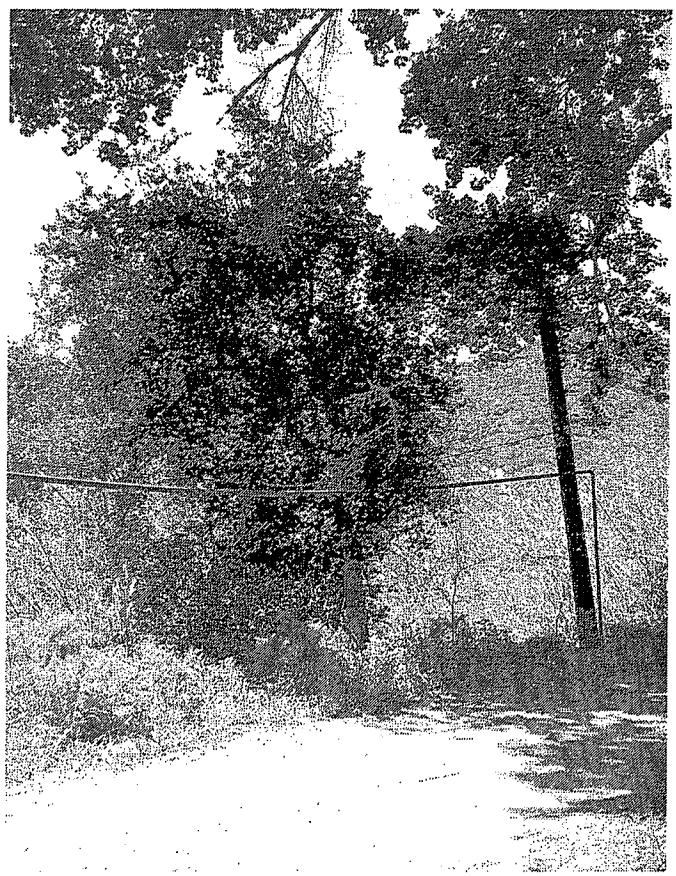


Figure 2. Tree # 1, Coast Live Oak

Site condition: Located on the upper edge of the west bank of fill material, directly under the canopy of the mature cottonwood.

Understory vegetation: Mixed grasses, arundo and small willows

Subject Tree Observations: Coast live oaks are common riparian trees in the Topanga Creek watershed.
Diameter at Standard Height (4.5 feet above grade): 12.2 inches
Height: 30 feet
Canopy spread: 20 feet
Condition rating: Good – 72%
Pests and diseases: No significant problems

Reason for Removal: Given the location at the upper edge of the fill material, it will not be possible for the tree to remain once the fill material is removed. Although the tree is in good condition, moving the tree is not recommended, as this is costly, would require significant investment in long term maintenance, and has a high incidence of failure.

Tree # 2. Cottonwood (*Populus fremontii*)

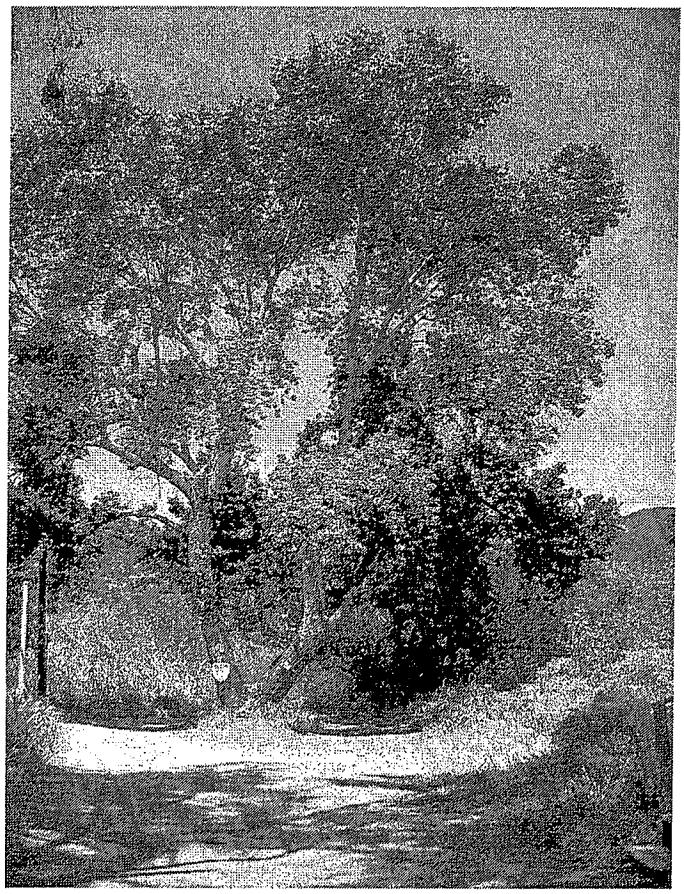


Figure 3. Tree # 2 Mature Cottonwood, south side April 2005

Site condition: It is located totally within the fill, and is approximately 50 feet from the edge of the creek on the east, and approximately 100 feet from the channel to the south.

Understory vegetation: There is a small circle approximately 3-6 feet in diameter around the trunk where non-native grasses are growing. The rest of the area under the dripline is compacted fill on the berm. Native willows and mulefat and one coast live oak are found within the perimeter of the dripline.

Subject Tree Observations: The mature cottonwood (*Populus fremontii*) is uncommon in the Topanga Creek watershed, although considered native to the region.
Diameter at Standard Height (4.5 feet above grade): 82.5 inches (45.4 inches on east main branch, 37.1 inches on the west main branch.)
Diameter at ground level: 70.2 inches (This is the main trunk diameter at current grade).
Height: 85 feet
Canopy spread: 60 feet
Condition Rating: Poor – 44%
Pests and Diseases: Over 80% of the trunk showed evidence of decay at the ground level, with additional evidence of widespread rot apparent in exudations, branch failure, twig dieback, foliage covered with brown spots, and fruiting bodies in old wounds.

Reason for Removal: The trunk of this tree has been buried in over 14 feet of fill since at least 1969. Preliminary evaluation of the trunk/ground interface indicates widespread decay. Additional evaluation at the time of excavation should be attempted to characterize the structural stability of the trunk further below ground, and the decision for removal made at that time.

Structural Condition: It was not possible to evaluate the structural condition of either the main trunk or the roots, as they are buried in fill. Therefore this condition rating reflects only the structural condition of the scaffold branches which have effectively become the trunks, and the canopy.

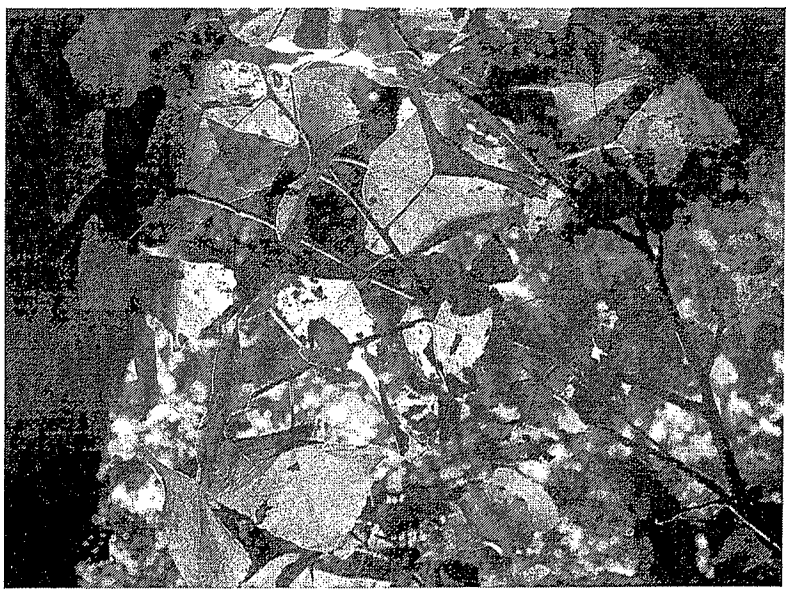
There are several large broken branches in the upper canopy, which could be the result of wind damage. There are also several dead branches in the canopy. The distribution of vertical branches is typical of the species. Many of the larger branch attachments have included bark. The branches that failed did so outside the branch collar, leaving shredded stubs subject to decay. Wounds from recently pruned branches have not yet begun to form wound wood, although old scars are well covered. The crown is open, with approximately 60% cover and there are a few signs of the start of mainstem dieback.

Health: Exudations located at areas of included bark, as well as along the side of the eastern branch point to widespread disease. Fruiting bodies were found emerging from several old wounds.

The foliage and twig growth, as well as numerous growth cracks in the upper scaffold branches indicates that the tree grew vigorously this year in response to the abundant rainfall (over 60 inches). Inspection of previous year twig growth through binoculars indicate that the tree has been consistently growing shoots averaging two inches for at least the past three years, as compared to 3-4 inches this growing season. Foliage

appeared normal when it sprouted in the spring, but has become infected with brown spots as the season progressed, with significant leaf drop and wilting evident.

Figure 4. Photographs of exudations and leaf condition



Results of Soil Boring: Borehole # 1 was drilled on the perimeter of the dripline on the south side of the tree on 17 February 2005 to a depth of 16.5 feet using an all terrain CME 750 drill rig using an eight inch hollow stem auger. Figure 1 shows the location of the borehole in relation to the cottonwood tree. The objective of the drilling was to characterize the soils in the fill material and test them for any hazardous materials. Drive-samples were collected at 2-5 foot intervals, labeled, stored and transported to Calscience Environmental Laboratory, Garden Grove, CA for analysis. Samples from Borehole one did not contain any elements that qualified as hazardous waste.

No roots were encountered in Borehole #1. The fill material consisted of sand, and silty sand. The creek bottom and groundwater were encountered at 12.5 feet.

While this testing was primarily done to satisfy soil characterization questions, it did provide relevant information concerning the type and quality of the fill material adjacent to the tree, which could have impacts on the root zone.

Tree #3. CA Walnut (*Juglans californica*)

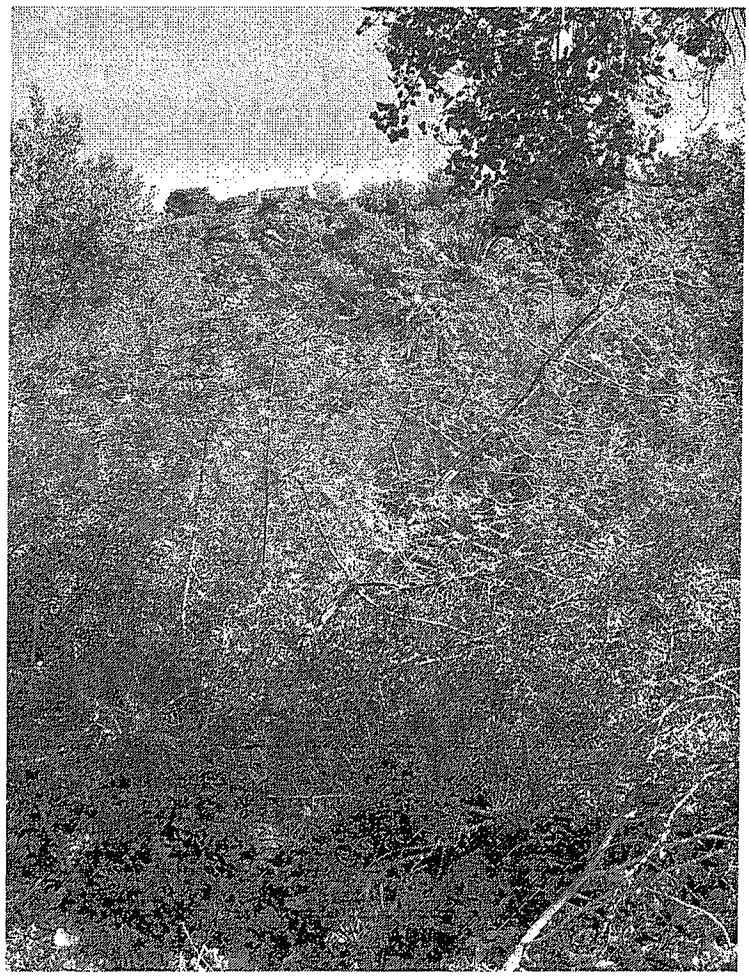


Figure 5. Tree # 3. CA Walnut (*Juglans californica*)

Site condition: Located at the top of the east fill bank, within the grouted riprap.

Understory vegetation: Blackberry, willow, mulefat, arundo

Subject Tree Observations: CA walnuts are less common riparian trees in the Topanga Creek watershed. Walnut woodlands are recognized as threatened on a statewide level.
Diameter at Standard Height (4.5 feet above grade): 8 inches
Height: 20 feet
Canopy spread: 15 feet
Condition rating: Fair- 68%
Pests and diseases: some loss of upper canopy leaves to insect herbivory. Trunk bark cracked.

Reason for Removal: Given the location at the upper edge of the fill material, it will not be possible for the tree to remain once the fill material is removed. Although the tree is in fair condition, moving the tree is not recommended, as this is costly, would require significant investment in long term maintenance, and has a high incidence of failure.

Trees to be Retained;

Due to their location on the lower edges of the berm, it appears possible to retain several mature sycamore trees. Careful excavation of the surrounding soil, supervised by a qualified arborist is recommended in order to determine distribution of roots, and extent of the root ball that can be retained to provide structural stability. Since failure of the trees is a possibility once the soil environment is changed, mitigation for these trees is recommended.

Tree # 4. Sycamore Tree (*Platenus racemosa*)

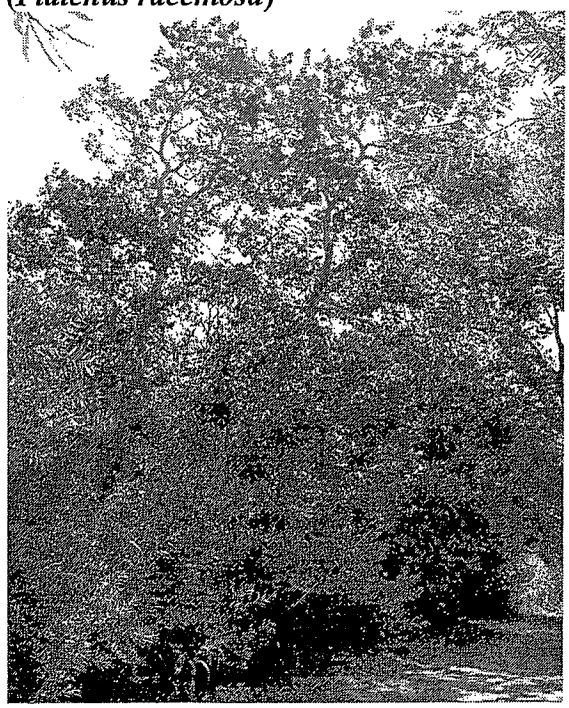


Figure 6. Tree # 4. Sycamore Tree (*Platenus racemosa*)

Site condition: Located on the upper edge of the east side of the berm above grouted riprap.

Understory vegetation: Blackberry, willows, walnut, arundo, mulefat

Subject Tree Observations: This multi-trunk tree is located where it may be possible to create a small island of remaining fill to support the tree.
Diameter at Standard Height (4.5 feet above grade): 35.6 inches (18.9 and 16.7)
Height: 50 feet
Canopy spread: 50 feet
Condition Rating: Good – 72%
Pests and diseases: Anthracnose present.

Tree #5. Sycamore Tree (*Platenus racemosa*)

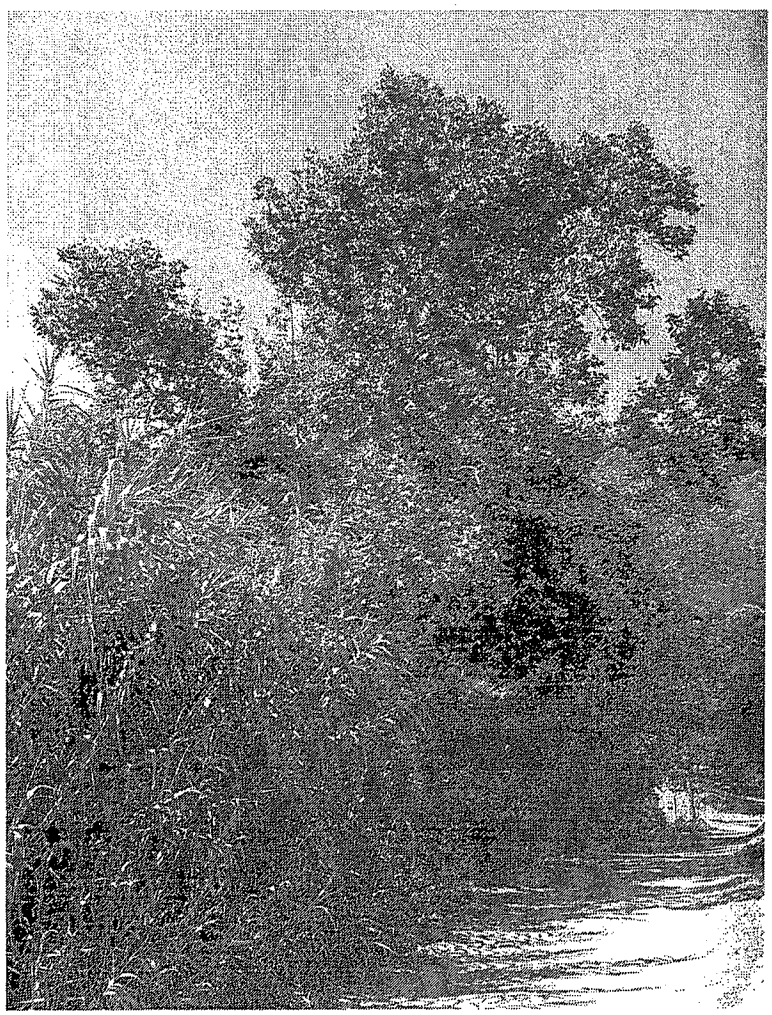


Figure 7. Tree #5 Sycamore Tree (*Platenus racemosa*) Looking northwest

Site condition: Located along the side of the west bank, below obvious riprap.

Understory vegetation: Arundo and mixed grasses

Subject Tree Observations: This tree has quite unusual branching, and due to its location on the side of the berm, it should be possible to create an island of fill material sufficient to sustain it once the berm is removed.
Diameter at Standard Height (4.5 feet above grade): 27.8 inches
Height: 70 feet
Canopy spread: 50 feet
Condition Rating: Fair – 68%
Pests and diseases: Anthracnose

Tree #6. Sycamore Tree (*Platenus racemosa*)

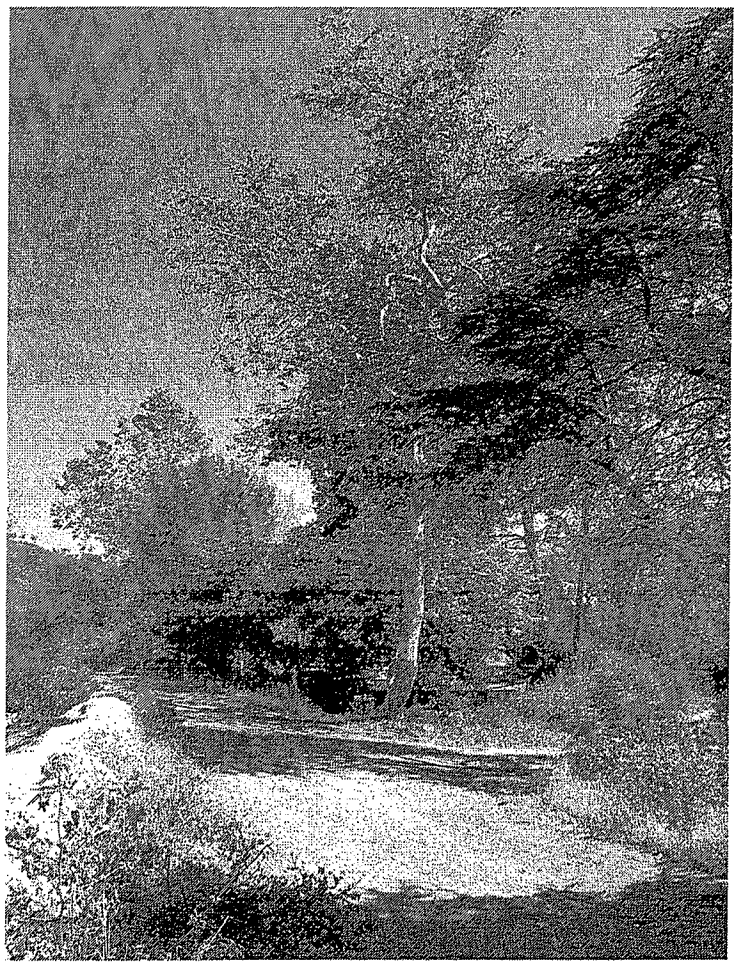


Figure 8. Tree #5. Sycamore Tree (*Platenus racemosa*)

Site condition: Located on the corner of the berm and an unpaved road. A two foot high gunnite wall separates the edge of the roadway and the trunk.

Understory vegetation: Mixed grasses, CA Bay tree is adjacent

Subject Tree Observations: It should be possible to remove the fill material on the east side of this tree without compromising the stability or much of the root zone.
Diameter at Standard Height (4.5 feet above grade): 37.8 inches (10.2 and 27.6)
Height: 70 feet
Canopy spread: 40 feet
Condition Rating: Fair – 53%
Pests and diseases: Anthracnose

Tree # 7. Sycamore Tree (*Platenus racemosa*)

Figure 9. Tree #7. Sycamore Tree (*Platenus racemosa*)

Site condition: Located behind the southwest corner of the berm and an unpaved road.

Understory vegetation: Dominanted by *Arundo donax* which obscured the root collar. Nasturtium and cape honeysuckle covered much of the trunk and canopy.

Subject Tree Observations: It should be possible to remove the fill material on the east side of this tree without compromising the stability or much of the root zone.
Diameter at Standard Height (4.5 feet above grade): 19.5 inches
Height: 35 feet
Canopy spread: 25 feet

Condition Rating: Good - 72%
Pests and diseases: Anthracnose

Tree # 8. Sycamore Tree (*Platenus racemosa*)

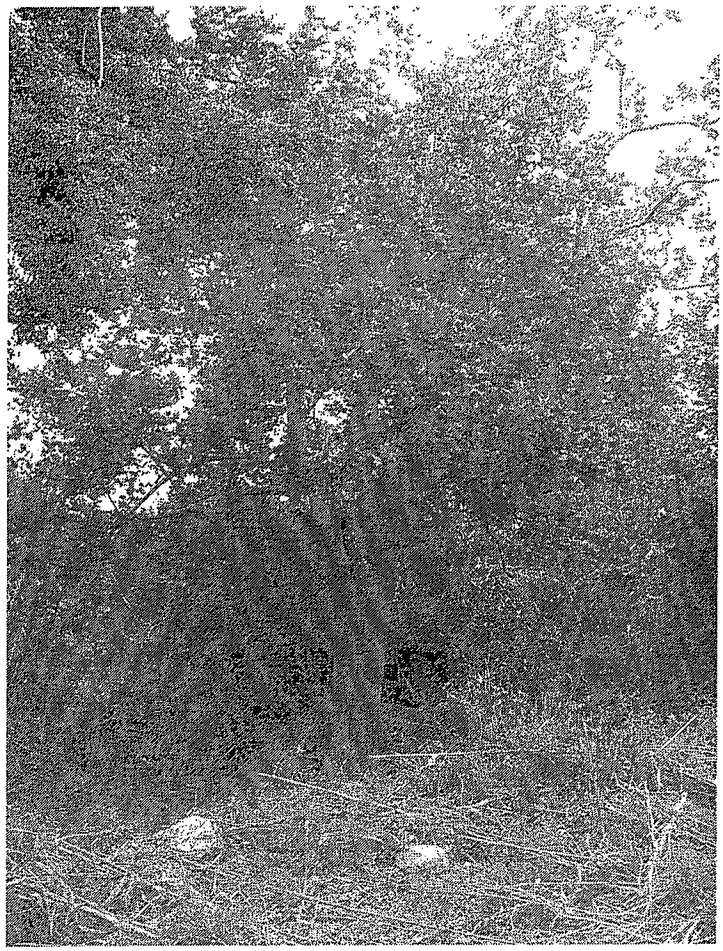


Figure 10. Tree #8. Sycamore Tree (*Platenus racemosa*)

Site condition: Located on a small rise southeast of the berm near an unpaved road.

Understory vegetation: *Arundo donax*, nasturtiums, castor bean and *Euphorbia terracina.*

Subject Tree Observations: This tree is far enough away from the work zone that it should not have any substantial impacts.
Diameter at Standard Height (4.5 feet above grade): 47.7 inches (22.2 and 25.5)
Height: 60 feet
Canopy spread: 40 feet
Condition Rating: Fair – 56%
Pests and diseases: Anthracnose, boring beetles in trunk up to 6 feet

Tree # 9. Sycamore Tree (*Platenus racemosa*)

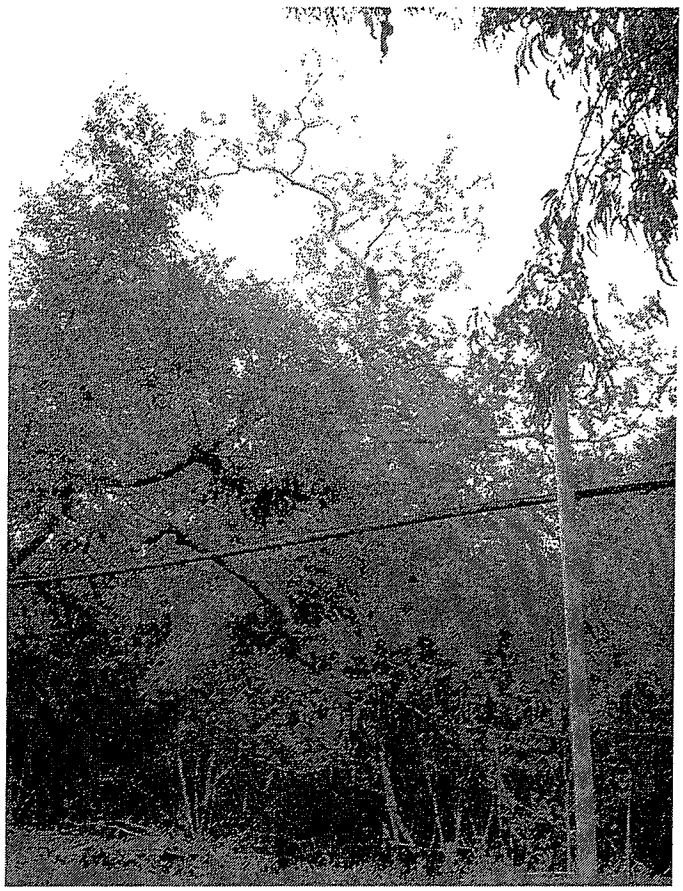


Figure 11. Tree #9. Sycamore Tree (*Platenus racemosa*)

Site condition: Located on the southwest corner of the berm.

Understory vegetation: *Arundo donax*, cape honeysuckle, other sycamores.

Subject Tree Observations: It should be possible to remove the fill material on the east side of this tree without compromising the stability or much of the root zone.
Diameter at Standard Height (4.5 feet above grade): 33 inches (13 and 20)
Height: 35 feet
Canopy spread: 40 feet
Condition Rating: Fair – 64%
Pests and diseases: Anthracnose

DISCUSSION

Removal of the coast live oak (#1), cottonwood (#2) and CA walnut trees (#3), along with the willows, toyon and elderberry is regrettable, but due to their location within the berm, it does not appear possible to retain them once the fill material is removed and their stability is compromised.

Based on the limited site observations possible at this time, it is difficult to evaluate the stability of the cottonwood trunk, which has been buried to some extent for over 35 years. Typically, roots and trunks that experience such severe grade changes and survive do so by generating additional roots from the trunk at a level sufficient to obtain necessary water and nutrients.

Cottonwood trees are adapted to the variable levels and dynamic processes of creek channels, and it appears that this tree has been able to develop sufficient root system to remain upright and to sustain a reasonably healthy canopy. However, once a tree has generated such an adventitious root system, it can be extremely harmful to remove it. Not only does the tree suffer from loss of absorbing root mass, which can directly reduce health and vigor, but the structural integrity of the buried trunk may be so compromised that removal of the fill causes the tree to fall over (Harris, 1992).

The ability to retain the sycamore trees will depend on the skill of the equipment operators and the distribution of the roots that become apparent upon excavation. Since the berm is heavily compacted and the trees appear to have grown on the berm following its installation, it may be possible to isolate the structural roots and leave an island of fill material surrounding them, allowing the trees to remain. Tree # 4 will be the most difficult to retain, due to its location on the top of the berm material. Trees #5 and 6 should be less subject to root loss and disturbance since they are located closer to the edges. Trees #7, 8 and 9 are also located far enough away from the proposed excavation zone that they should be subject to limited disturbance.

CONCLUSION

Excavation of the berm, while beneficial to restoring the creek channel and floodplain, will result in the removal of the native trees growing within it. This will include the loss of:

- Approximately 30 willows (*Salix sp.)* of varying sizes
- Two toyon (*Heteromeles arbutifolia*)
- One elderberry (*Sambucus mexicanus*)
- One coast live oak (*Quercus agrifolia*) Tree #1
- One heritage cottonwood (*Populus fremontii*) Tree #2
- One CA walnut (*Juglans californica*) Tree #3

The mature sycamore trees (Trees #4-9) should be retained if at all possible.

RECOMMENDATIONS

Since the objective is to preserve native trees if at all possible, the following recommendations are offered to provide guidelines on how to proceed with the berm removal in the most sensitive way possible.

Trees to be removed:

Mitigation for the loss of these mature native trees will be required by the California Coastal Commission and the California Department of Fish and Game Streambed Alteration permit. The CDFG standard ratio is 3:1, while that of the Coastal Commission is a minimum of 10:1. Given the sensitivity of the area, a higher ratio of mitigation plantings is recommended. These mitigation trees should be incorporated into the Revegetation Plan for the Berm Removal and

planted at that time. This more extensive mitigation will save time and money over the long run, as well as provide important canopy cover to the restored creek channel and floodplain.

Mitigation Plan for Trees removed:

1. Tree #1 COAST LIVE OAK
   The loss of this tree should be mitigated with planting a minimum of five one gallon oaks grown from locally collected acorns, and an additional 10 acorns in tree tubes.

2. Tree #2 COTTONWOOD
   The loss of this heritage size tree is significant, both due to its size and the fact that the species is uncommon in the Topanga Creek Watershed. Mitigation should include planting a minimum of 15 cuttings propagated from the tree prior to its removal.

3. Tree #3 CA WALNUT
   Although this is a relatively small tree, the loss of CA Walnuts throughout their range suggests that a minimum replacement planting of three one gallon trees, as well as 10 nuts in tree tubes. Nuts should be gathered from within the watershed.

4. A minimum of 100 willow stakes cut from trees on site should be incorporated into the Revegetation Plan.

5. A minimum of 10 toyon and elderberries should be planted, from seed material or cuttings harvested from within the watershed.

Trees to be retained:
In order to maximize the potential for retaining the mature sycamores (Trees # 4-9), the following recommendations are suggested:

Excavation Technique

1. An arborist should be on site at all times to provide continuous guidance to the excavation crew.
2. The area within the dripline plus an additional radius of 15 feet should be delineated as the Root Protection Zone. All excavation within this zone should be done under the direct supervision of a qualified arborist.
3. Material should first be removed with hand tools within a six foot radius of the trunk to locate structural roots. Based on distribution of roots and trunk condition uncovered, the arborist can advise the crew if use of a bobcat or other excavation machine is possible without compromising the tree. If not, then excavation should be confined to hand tools.
4. If there is a question of tree stability once the fill material is removed, the arborist shall work with the CDPR ecologist to determine if the tree should be removed or retained and either allowed to fail under natural conditions or supported by bracing or cabling.

Maintenance and Monitoring Plan

1. A minimum of five years of maintenance should be required, which includes quarterly visits from the arborist and their crew to monitor the structural integrity and overall condition of the trees.
2. A minimum of five years of monitoring should also be required, including but not limited to, quarterly photographic documentation, and documentation of structural and health condition.

Mitigation Plan

1. Should any of the sycamore trees fail, a pro-active mitigation planting should be incorporated into the Revegetation Plan for the site. A minimum of 15 one gallon sycamore trees should be planted. Use of locally derived plant materials is recommended.

GLOSSARY

Adventitious roots – Roots emerging from areas of the trunk buried in fill.

Hazard Tree – A tree that due to its condition has a high potential for failure.

Target – An object, structure or pedestrian area that could be impacted if a tree fell.

REFERENCES

Harris, Richard W. 1992. Arboriculture: Integrated Management of Landscape Trees, Shrubs and Vines. Second Edition. Prentice Hall, Englewood Cliffs, NJ.

APPENDIX A

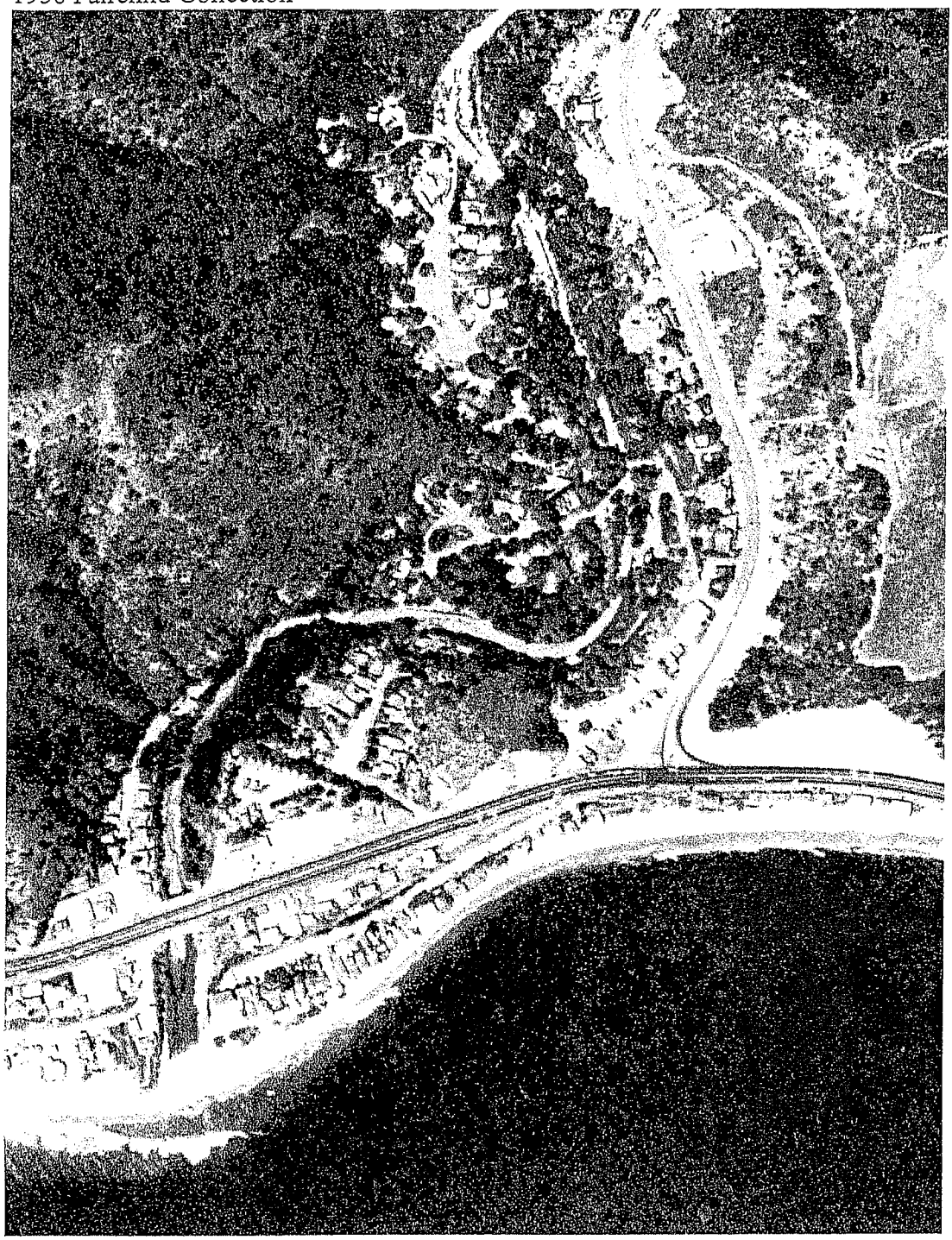
HISTORIC AERIAL PHOTOGRAPHS
RODEO GROUNDS BERM AREA

1928 Fairchild Collection
1940 Fairchild Collection
1956 Fairchild Collection
1997 Resource Conservation District of the Santa Monica Mts. Collection

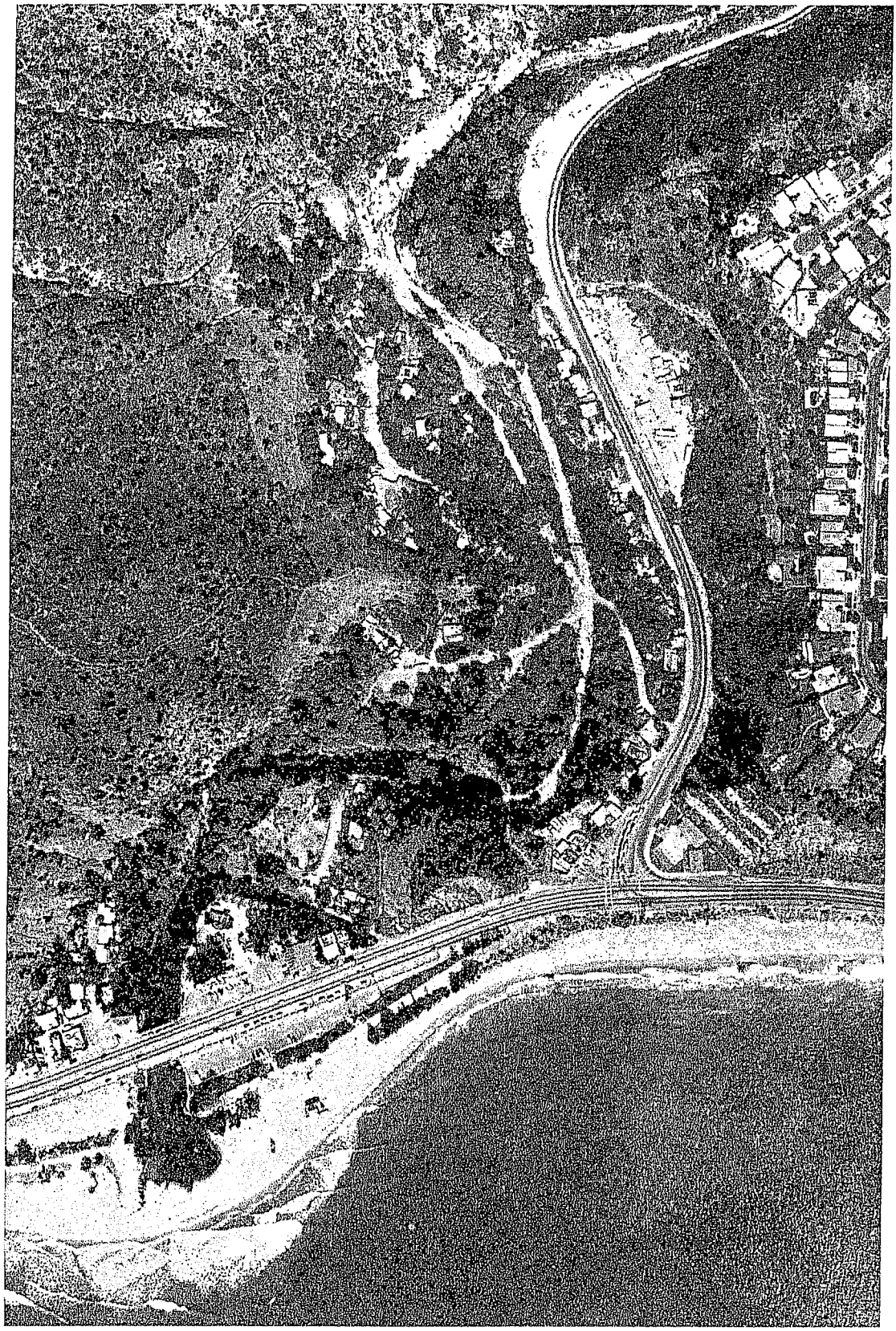
1928 Fairchild Collection

1940 Fairchild Collection

1956 Fairchild Collection



1997 RCDSMM Collection



APPENDIX B

RODEO GROUNDS BERM

FIELD NOTES

ADDITIONAL PHOTOS

SOIL BOREHOLE LOCATION MAP

RODEO GROUNDS BERM TREE SUMMARY			
Sep-05			
Submitted by Rosi Dagit, Certified Arborist #1054			
Tree Number	**1**	**2**	**3**
Tree Species	*Q. agrifolia*	*P. fremontii*	*J. californica*
Number of Trunks	1	2	1
DSH (4.5 feet above grade)	12.2	82.5	8
Heritage Tree?	NO	YES	NO
Height (feet)	30	85	20
Condition Rating	Good -72%	Poor - 44%	Fair - 68%
Leaning Direction	SE	N	SE
Root Crown condition	in W bank	buried	in E bank
Canopy condition (% shade)	90%	60%	50%
Dripline measurements:			
(dist. from trunk/ ht. branch)			
North	7'/10'	36'/20'	5'/10'
East	15'/8'	30'/18'	5'/3'
South	15'/10'	27'/18'	15'/3'
West	15'/20'	30'/20'	10/3'
Recommended Action	**REMOVE**	**REMOVE**	**REMOVE**
NOTES	due to	Trunk fully	growing into
	location,	buried in	concrete
	it will be	fill, rotted	
	impossible	at present	
	to save	soil line	

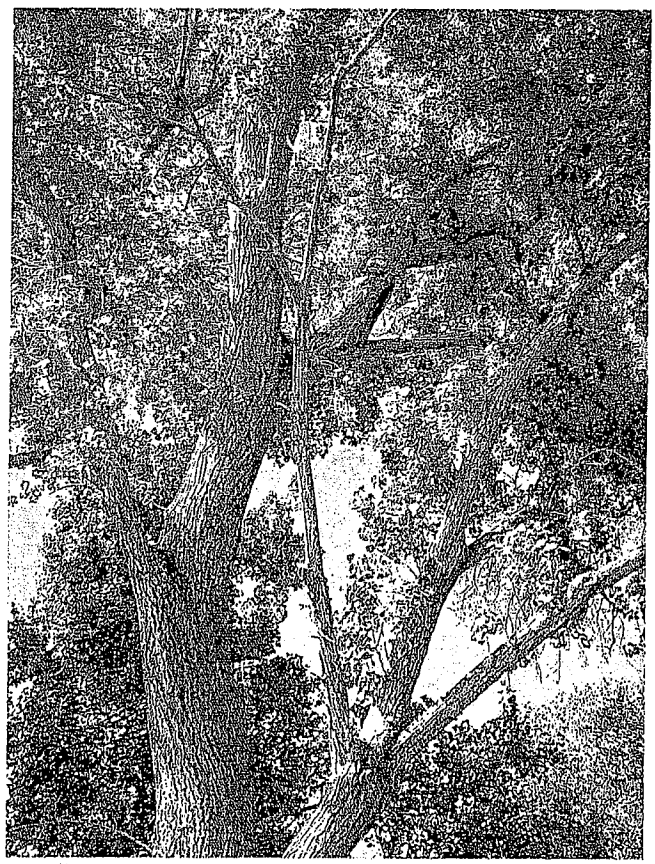
Tree Number	**4**	**5**	**6**
Tree Species	*P. racemosa*	*P. racemosa*	*P. racemosa*
Number of Trunks	2	1	2
DSH (4.5 feet above grade)	35.6	27.8	37.8
Heritage Tree?	YES	NO	YES
Height (feet)	60	70	70
Condition Rating	Good- 72%	Fair -64%	Fair- 52%
Leaning Direction	NE	N	N
Root Crown condition	in E bank	in W bank	in W bank
Canopy condition (% shade)	60%	80%	80%
Dripline measurements:			
(dist. from trunk/ ht. branch)			
North	25'/10'	40'/35'	40'/25'
East	20'/25'	30'/12'	10'/20'
South	25'/35'	30'/15'	15'/4'
West	30'/20'	40'/20'	30'/30'
Recommended Action	**RETAIN**	**RETAIN**	**RETAIN**
NOTES	might be	might be	might be
	saved by	saved by	saved by
	carefull	carefull	carefull
	excavation	excavation	excavation
	leaving an	leaving an	at corner
	island	island	
Tree Number	**7**	**8**	**9**
Tree Species	*P. racemosa*	*P. racemosa*	*P. racemosa*
Number of Trunks	1	2	2
DSH (4.5 feet above grade)	19.5	47.7	33
Heritage Tree?	NO	YES	NO
Height (feet)	35	60	35
Condition Rating	Good- 72%	Fair -56%	Fair- 64%
Leaning Direction	S	S	S
Root Crown condition	in bank	in bank	in bank
Canopy condition (% shade)	60%	75%	50%
Dripline measurements:			
(dist. from trunk/ ht. branch)			
North	15'/15'	20'/5'	20'/5'
East	10'/10'	30'/25'	20'/5'
South	25'/5'	20'/20'	15'/10'
West	15'/10'	40'/5'	25'/10'
Recommended Action	**RETAIN**	**RETAIN**	**RETAIN**
NOTES	should be	should be	should be
	saved by	saved by	saved by
	carefull	carefull	carefull
	excavation	excavation	excavation
			at corner

Guide to Judging Plant Condition			International Society of Arboriculture, 2000			
Condition Scoring system	POINTS		RATING			
No problems (based on inspection)	5		Excellent 90-100 %			
No apparent problems	4		Good 70-89%			
Minor problem(s)	3		Fair 50-69%			
Major problem(s)	2		Poor 25-49%			
Extreme problem(s)	1		Very Poor 05-24%			
Inspector: Rosi Dagit						
	Tree No. and Species					
CONDITION RATING	***1. Quercus***	***72%***	***2. Populus***	***44%***	***3. Juglans***	***68%***
(Divide subtotal points by 25 (total points possible)	***agrifolia***	Good	***fremontii***	Poor	***californica***	Fair
and multiply by 100 to obtain percent rating						
CONDITION FACTORS	**NOTES**	**SCORE**	**NOTES**	**SCORE**	**NOTES**	***SCORE***
FACTOR 1. ROOTS		4	buried under fill	***1***	on E fill bank	***3***
Root anchorage	on W. fill bank					
Confined relative to top			boring to S found no roots		roots confined	
Collar soundness			approx. 80% decayed		in concrete	
Mechanical injury						
Girdling or kinked roots						
Compaction or water-logged roots			heavy fill compacted			
Toxic gas and chemical symptoms						
Presence of insects or diseases						
FACTOR 2. TRUNK		4	buried under fill	***2***		***3***
Sound bark and wood, no cavities	good growth					
Upright trunk (well tapered)	cracks				leans strongly	
Mechanical or fire injury			wounded by vehicles			
Cracks - frost, fire, etc.					many cracks	
Swollen or sunken areas			sunken in several areas			
Presence of insects or diseases						
FACTOR 3. SCAFFOLD BRANCHES	ok	4		***2***	ok	***4***
Strong attachments						
Smaller diameter than trunk						
Vertical branch distribution					small branches	
Free of included bark			some at major limbs			
Free of decay and cavities			main stubs rotted			
Well-pruned, no severe heading back			stub cuts			
Well-proportioned,-tapered, laterals along branches						
Wound closure			mixed, some ok			
Amount of dead wood or fire injury (% of canopy)	5 % deadwood		15% dead, many broken		15% deadwood	
Presence of decay, insects or diseases			branches			
FACTOR 4. SMALL BRANCHES AND TWIGS		3		***3***	ok	***4***
Vigor of current shoots, compared to past 3-5 years	2-6 inch shoots		ok for last 2 years w/ rain			
Well-distributed through the canopy						
Normal bud appearance - color, shape, size for sp.						
Presence of weak or dead twigs			10-20 %			
Presence of insects or diseases						
FACTOR 5. FOLIAGE		3		***3***		***3***
Normal appearance - size and color for sp.	small overall		ok			
Nutrient deficiencies						
Herbicide, chemical or pollutant injury symptoms						
Wilted or dead leaves			over 50% by mid summer			
Presence of insects or diseases	whitefly, leaf miner		leaf scortch, brown spots		leaves eaten	
Total subtotal points assessing all Five Factors		***18***		***11***		***17***

Guide to Judging Plant Condition			International Society of Arboriculture, 2000			
Condition Scoring system	POINTS		RATING			
No problems (based on inspection)	5		Excellent 90-100 %			
No apparent problems	4		Good 70-89%			
Minor problem(s)	3		Fair 50-69%			
Major problem(s)	2		Poor 25-49%			
Extreme problem(s)	1		Very Poor 05-24%			
Inspector: Rosi Dagit						
CONDITION RATING	***4. Platenus***	***72%***	***5. Platenus***	***64%***	***6. Platenus***	***52%***
(Divide subtotal points by 25 (total points possible)	***racemosa***	Good	***racemosa***	Fair	***racemosa***	Fair
and multiply by 100 to obtain percent rating						
CONDITION FACTORS	**NOTES**	**SCORE**	**NOTES**	**SCORE**	**NOTES**	**SCORE**
FACTOR 1. ROOTS		4				
Root anchorage	on E fill bank		on w fill bank	4	on w fill bank	3
Confined relative to top			extends out		in corner	
Collar soundness					behind small	
Mechanical injury					concrete wall	
Girdling or kinked roots						
Compaction or water-logged roots						
Toxic gas and chemical symptoms						
Presence of insects or diseases						
FACTOR 2. TRUNK		4		3		3
Sound bark and wood, no cavities					axe wounds	
Upright trunk (well tapered)			leader broken off			
Mechanical or fire injury						
Cracks - frost, fire, etc.						
Swollen or sunken areas						
Presence of insects or diseases						
FACTOR 3. SCAFFOLD BRANCHES		4		3		3
Strong attachments			weak attachments		weak attachments	
Smaller diameter than trunk			odd angles			
Vertical branch distribution						
Free of included bark						
Free of decay and cavities						
Well-pruned, no severe heading back						
Well-proportioned,-tapered, laterals along branches			broken branches		broken branches	
Wound closure			tears present		tears present	
Amount of dead wood or fire injury (% of canopy)			10% deadwood		15% deadwood	
Presence of decay, insects or diseases						
FACTOR 4. SMALL BRANCHES AND TWIGS		3		3		2
Vigor of current shoots, compared to past 3-5 years						
Well-distributed through the canopy					thin, sparse	
Normal bud appearance - color, shape, size for sp.			small leaves		small leaves	
Presence of weak or dead twigs	15% deadwood		25% deadwood		50% deadwood	
Presence of insects or diseases			chlorosis		chlorosis	
FACTOR 5. FOLIAGE		3		3		2
Normal appearance - size and color for sp.					wilted	
Nutrient deficiencies			chlorotic		chlorotic	
Herbicide, chemical or pollutant injury symptoms						
Wilted or dead leaves			50 % wilted		80% wilted	
Presence of insects or diseases	anthracnose		anthracnose		anthracnose	
Total subtotal points assessing all Five Factors		***18***		***16***		***13***

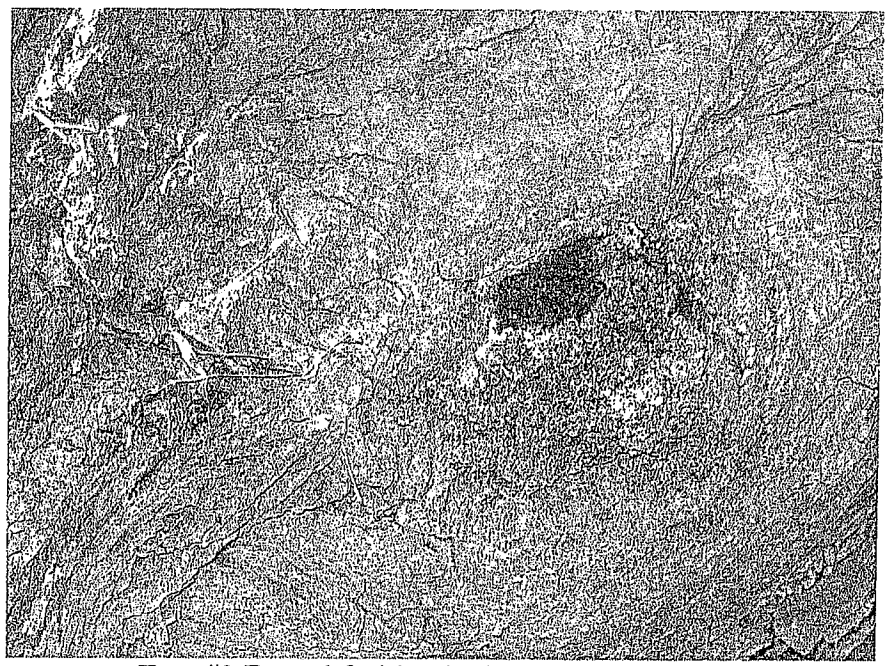
Guide to Judging Plant Condition			International Society of Arboriculture, 2000			
Condition Scoring system POINTS			RATING			
No problems (based on inspection) 5			Excellent 90-100 %			
No apparent problems 4			Good 70-89%			
Minor problem(s) 3			Fair 50-69%			
Major problem(s) 2			Poor 25-49%			
Extreme problem(s) 1			Very Poor 05-24%			
Inspector: Rosi Dagit						
CONDITION RATING						
(Divide subtotal points by 25 (total points possible)	***7. Platenus***	***72%***	***8. Platenus***	***56%***	***9. Platenus***	***64%***
and multiply by 100 to obtain percent rating	***racemosa***	Good	***racemosa***	Fair	***racemosa***	Fair
CONDITION FACTORS						
FACTOR 1. ROOTS	**NOTES**	**SCORE**	**NOTES**	**SCORE**	**NOTES**	**SCORE**
Root anchorage		3				
Confined relative to top	buried by arundo		buried in fill	3	on bank	4
Collar soundness					above trench	
Mechanical injury						
Girdling or kinked roots						
Compaction or water-logged roots						
Toxic gas and chemical symptoms						
Presence of insects or diseases			borers and exudate			
FACTOR 2. TRUNK						
Sound bark and wood, no cavities		4		3		3
Upright trunk (well tapered)	leans to South					
Mechanical or fire injury						
Cracks - frost, fire, etc.			fire scars			
Swollen or sunken areas					swellings	
Presence of insects or diseases			boring beetles up 6'			
FACTOR 3. SCAFFOLD BRANCHES						
Strong attachments		4	sharp angles	2		3
Smaller diameter than trunk					sharp angles	
Vertical branch distribution						
Free of included bark						
Free of decay and cavities			main branches dead			
Well-pruned, no severe heading back						
Well-proportioned,-tapered, laterals along branches			some woundwood			
Wound closure						
Amount of dead wood or fire injury (% of canopy)						
Presence of decay, insects or diseases			35% deadwood		20% deadwood	
FACTOR 4. SMALL BRANCHES AND TWIGS						
Vigor of current shoots, compared to past 3-5 years		4		3		3
Well-distributed through the canopy						
Normal bud appearance - color, shape, size for sp.						
Presence of weak or dead twigs						
Presence of insects or diseases	15% deadwood				20% deadwood	
FACTOR 5. FOLIAGE						
Normal appearance - size and color for sp.		3		3		3
Nutrient deficiencies						
Herbicide, chemical or pollutant injury symptoms			chlorotic			
Wilted or dead leaves						
Presence of insects or diseases			10-15 % wilted			
	anthracnose		anthracnose		anthracnose	
Total subtotal points assessing all Five Factors		***18***		***14***		***16***

Tree #2 Broken branch in upper canopy



Tree #2 Exudate and dead branches in upper canopy

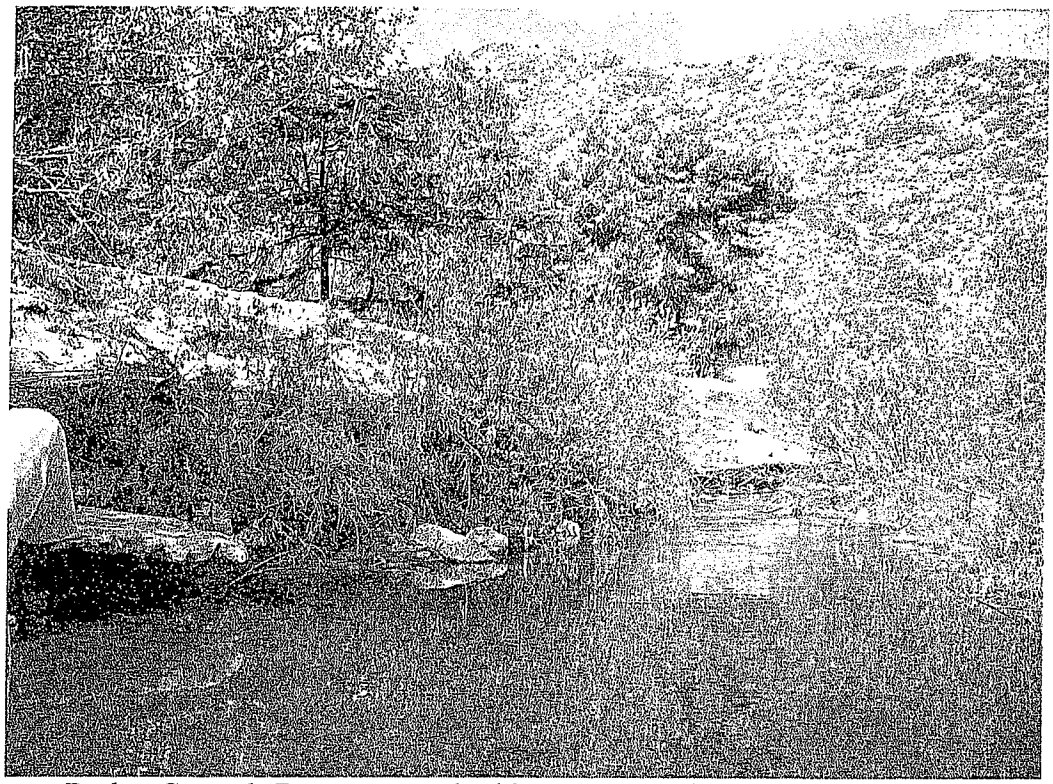
Tree #2 Decay in crotch near ground



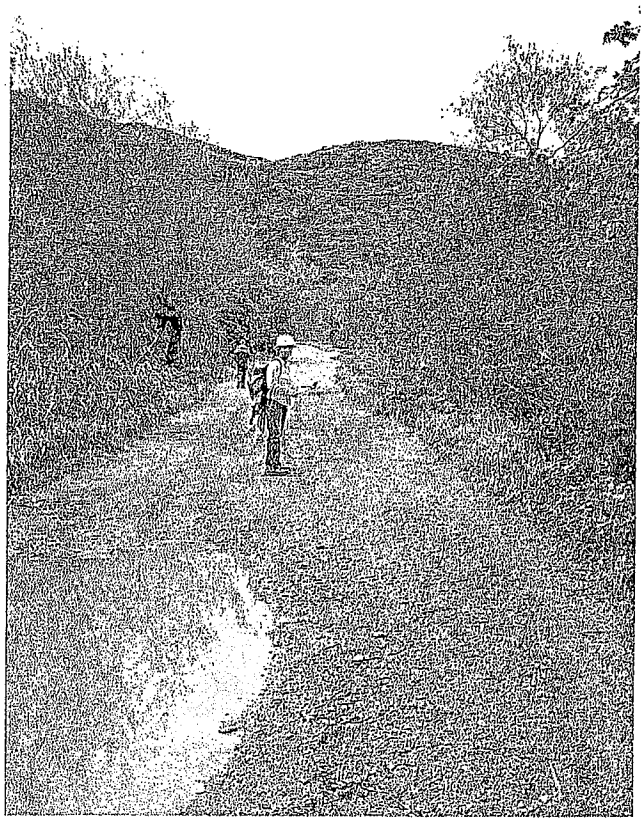
Tree #2 Fungal fruiting body in old branch scar

Tree #5 Unusual branch attachments on Sycamore

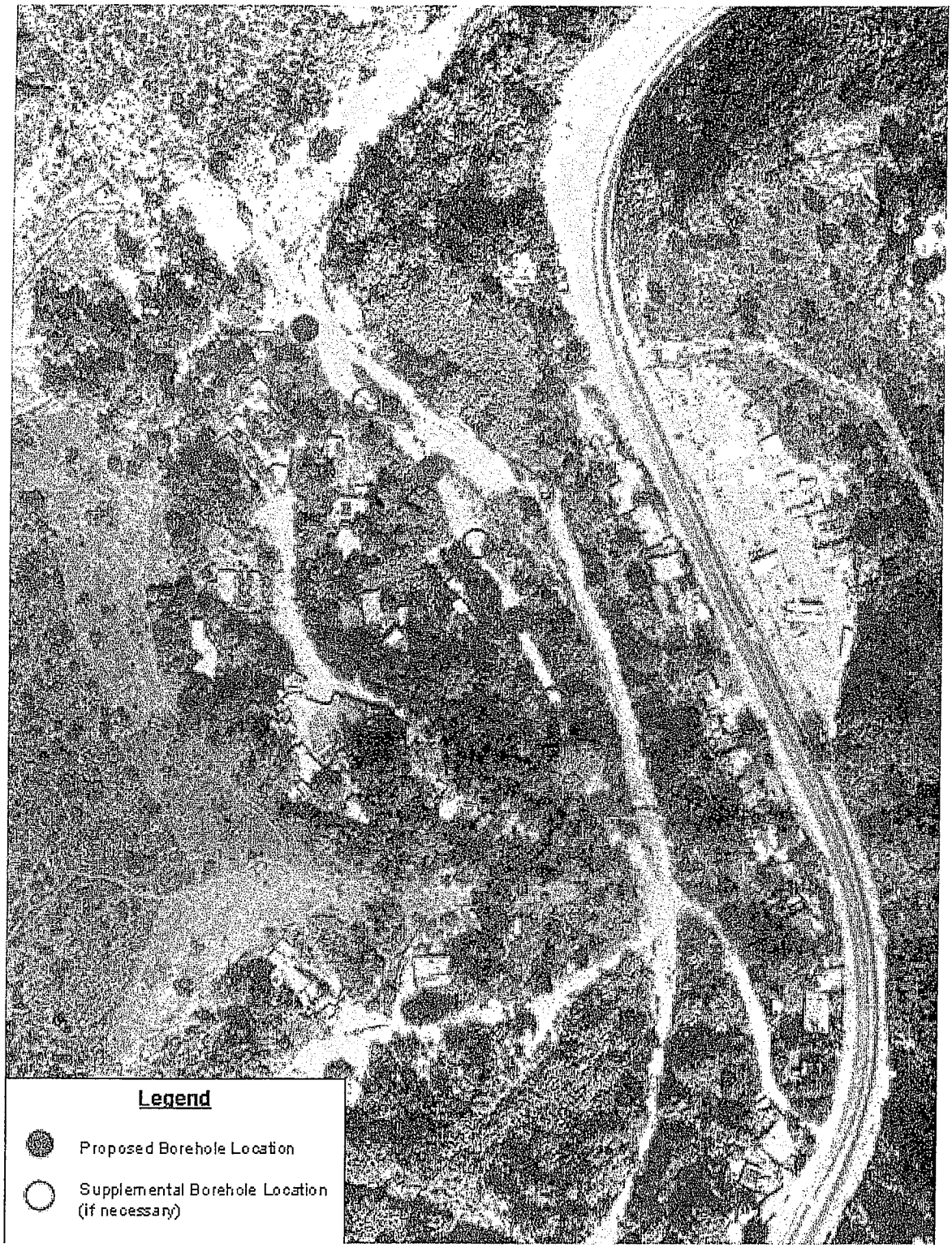
Tree #6 Sycamore to remain, illustrating root zone



Rodeo Grounds Berm as seen looking upstream from the creek channel



Top of berm showing willow thickets



Locations of soil bore holes drilled in February 2005